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A CELL FOR REARING MITES

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Insect Investigations

The cell described herein has been successfully used in rearing one species each of Tyroglyphus and Rhyzoglyphus, two species of Tarsonemus, one species of Histiostoma, and two other species of mites found upon cultivated mushrooms. It can probably be used successfully for all mites that do not require living food, and for many that do.

Three-ply drawing paper is cut slightly smaller than a microscope slide (about $\frac{7}{8}$ by $2\frac{3}{4}$ inches). In the center of this a hole about one-fourth inch or less in diameter is punched. When the paper is soaked in water the three layers come apart. This paper is of good quality and does not deteriorate after long or repeated soaking. After being saturated, the paper is lifted from the water, pressed between blotters to remove excess moisture, and placed upon a microscope slide, preferably one of the thin sort known as "mending slides." From one to three or more thicknesses may be used, depending upon the size of the mite to be confined therein.

A small piece of food is placed in the cell, the mite or mites lifted into the cell upon the point of a fine brush, another slide placed on top, and the whole wound with several turns of heavy thread. Slips of paper carrying numbers or other identification may be slipped under the thread.

For mushroom mites or other feeders upon fungus or dead vegetable matter, small bits of dried mushrooms are used as food, this material being readily accepted by the mites and easily kept on hand. It is best to place the food so that it touches the edge of the cell.

By regulating the amount of water in the paper, the proper degree of moisture may be maintained in the cell. Observations may be made at any time from either side with a low-power binocular or compound microscope.

To avoid excessive drying out, the cells are kept in a moist chamber, such as a desiccator with the bottom filled with water, or a battery jar with a piece of flat glass in the bottom, supported above water upon corks, and with a glass sheet for a cover.